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10/715,091	11/17/2003	Bradford G. Corbett JR.	20470.015-AP	3254

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WHITAKER, CHALK, SWINDLE & SAWYER, LLP
3500 CITY CENTER TOWER II
301 COMMERCE STREET
FORT WORTH, TX 76102-4186

EXAMINER	
STAICOVICI, STEFAN	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/715,091	CORBETT, BRADFORD G.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-4, in the reply filed on May 13, 2005 is acknowledged.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-4 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/776,842 in view of Doolittle (US Patent No. 3,827,660).

Claim 1 of copending Application No. 10/776,842 teach the basic claimed process of installing a gasket in a socket end of a thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having a generally cylindrical outer working surface; installing a gasket at a first circumferential position on the

outer working surface, the gasket having at least selected surfaces coated with an external polymeric anti-corrosion and anti-friction coating, providing a retention member at a second circumferential location on the mandrel nearer the inner end of the mandrel, the retention member abutting the gasket in a normally extended position but being retractable to a retracted position in a subsequent manufacturing step; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket with the retention member being in the extended position, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket and again contacts the working surface of the mandrel; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel.

Regarding claim 1, although Claim 1 of copending Application No. 10/776,842 teaches a polymeric coating as a anti-friction coating, Claim 1 of copending Application No. 10/776,842 does not teach a polyurethane coating. However, it is noted that Claim 3 of copending Application No. 10/776,842 teaches a CHEMGLAZE^{TM} coating as a anti-friction coating. It is submitted that a CHEMGLAZE^{TM} coating is a polyurethane coating. Further, Doolittle ('660) teaches that both Teflon and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) to the gasket in the process of Claim 1 of copending Application No. 10/776,842 because, a polyurethane coating provides for improved anti-friction properties, hence providing for an improved process and also because

Claim 3 of copending Application No. 10/776,842 teaches a CHEMGLAZE™ coating, hence suggesting a polyurethane coating.

In regard to claim 2, Claim 2 of copending Application No. 10/776,842 teaches that the cured coating has the following properties:

Tensile strength ASTM D 412; Method A, Die C:	5000psi
Percent Elongation; ASTM D 412 Method A, Die C:	500 percent
Taber Abraser; CS17 1000 g/1000 cycles:	No loss
Durometer Shore A:	110

Specifically regarding claim 3, Claim 2 of copending Application No. 10/776,842 teaches spray coating.

Regarding claim 4, Claim 6 of copending Application No. 10/776,842 teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, and wherein the coating is applied to at least selected portions of the circumferential contact area.

This is a provisional obviousness-type double patenting rejection.

4. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-12 of U.S. Patent No. 6,328,309 in view of Doolittle (US Patent No. 3,827,660).

Claim 1 of U.S. Patent No. 6,328,309 teaches the basic claimed process of installing a gasket in a socket end of a thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having a generally cylindrical outer

working surface; installing a gasket at a first circumferential position on the outer working surface, the gasket having at least selected surfaces coated with a spray-on anti-friction coating wherein the spray-on anti-friction coating is applied by spraying on a dry powder followed by heating the powder to cause it to be fixed; providing a retention member at a second circumferential location on the mandrel nearer the inner end of the mandrel, the retention member abutting the gasket in a normally extended position but being retractable to a retracted position in a subsequent manufacturing step; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket with the retention member being in the extended position, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket and again contacts the working surface of the mandrel; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel. Further, Claim 6 of U.S. Patent No. 6,328,309 teaches that said sprayed anti-friction coating is polytetrafluoroethylene (Teflon™) .

Regarding claim 1, although Claims 1-12 of U.S. Patent No. 6,328,309 teach a Teflon™ anti-friction coating, Claims 1-12 of U.S. Patent No. 6,328,309 do not teach a polyurethane anti-friction coating. Doolittle ('660) teaches that both Teflon™ and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a Teflon™ coating to the gasket in the process Claims 1-12 of U.S.

Patent No. 6,328,309 because, Doolittle ('660) specifically teaches that Teflon™ and polyurethane coatings are equivalent alternatives for making an anti-friction coating.

In regard to claim 2, because the process of Claims 1-12 of U.S. Patent No. 6,328,309 in view of Doolittle ('660) teach a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed in claim 2.

Specifically regarding claim 3, Claim 1 of U.S. Patent No. 6,328,309 teaches spraying an anti-friction coating by spraying a dry powder.

Regarding claim 4, Claim 7 of U.S. Patent No. 6,328,309 teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, and wherein the anti-friction coating is applied to at least selected portions of the circumferential contact area.

5. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Corbett, Jr. (US Patent No. 6,328,309 B1) and in further view of Doolittle (US Patent No. 3,827,660).

Claim 1 of U.S. Patent No. 6,676,886 B2 teaches the basic claimed process of installing a gasket in a socket end of a molecularly oriented thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having an outer working surface; installing a gasket at a first circumferential position on the outer working surface; providing a backup collar at a second circumferential location on the mandrel, the backup collar having an exposed lip portion which abuts the gasket at an acute angle with respect

to the outer working surface of the mandrel; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket and backup collar, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket; retracting the backup collar; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel; wherein the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, the exterior surface forming a sloped contact area for contacting the lip portion of the backup collar in complimentary fashion; wherein the sloped contact area of the gasket exterior surface also forms an acute angle with respect to the working surface of the mandrel; wherein the complimentary acute angles of the backup collar and gasket form a wedge shaped contact area which serves to retain the gasket in its initial circumferential position on the working surface of the mandrel as the heated pipe is forced over the mandrel and gasket; the wedge shaped contact area exerting both a longitudinal restraining force along the pipe longitudinal axis and a radial restraining force which is perpendicular to the pipe longitudinal axis to force the gasket radially inward in the direction of the mandrel as the pipe is pushed over the mandrel.

Regarding claims 1 and 3, Claims 1-10 of U.S. Patent No. 6,676,886 B2 do not teach spraying an anti-friction coating. Corbett, Jr. ('309) teaches spraying a Teflon^{TM} anti-friction coating onto the gasket. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Claims

1-10 of U.S. Patent No. 6,676,886 B2 because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end.

Further regarding claim 1, although Claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Corbett, Jr. ('309) teaches a Teflon™ anti-friction coating, Claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Corbett, Jr. ('309) do not teach a polyurethane coating. Doolittle ('660) teaches that both Teflon™ and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a Teflon™ coating to the gasket in the process of Claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Corbett, Jr. ('309) because, Doolittle ('660) specifically teaches that Teflon™ and polyurethane coatings are equivalent alternatives for making an anti-friction coating.

In regard to claim 2, because the process of Claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Corbett, Jr. ('309) and in further view of Doolittle ('660) teach a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed in claim 2.

Specifically regarding claim 4, Claims 1-10 of U.S. Patent No. 6,676,886 B2 teach that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface. Further, Corbett, Jr. ('309) teaches that the anti-friction coating is applied to at least selected portions of the circumferential contact area. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett,

Jr. ('309) in the process of Claims 1-10 of U.S. Patent No. 6,676,886 B2 in view of Doolittle ('660) because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett, Jr. (US Patent No. 6,328,309 B1) in view of Doolittle (US Patent No. 3,827,660).

Corbett, Jr. ('309) teaches the basic claimed process of installing a gasket in a socket end of a thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having a generally cylindrical outer working surface; installing a gasket at a first circumferential position on the outer working surface, the gasket having at least selected surfaces coated with a spray-on anti-friction coating wherein the spray-on anti-friction coating is applied by spraying on a dry powder followed by heating the powder to cause it to be fixed; providing a retention member at a second circumferential location on the mandrel nearer the inner end of the mandrel, the retention member abutting the gasket in a normally extended position but being retractable to a retracted position in a subsequent

manufacturing step; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket with the retention member being in the extended position, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket and again contacts the working surface of the mandrel; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel (see claim 1 of Corbett, Jr. ('309)). Further, Corbett, Jr. ('309) teaches that said sprayed anti-friction coating is polytetrafluoroethylene (Teflon™) (see claim 6 of Corbett, Jr. ('309)).

Regarding claim 1, although Corbett, Jr. ('309) teaches a Teflon™ anti-friction coating, Corbett, Jr. ('309) does not teach a polyurethane anti-friction coating. Doolittle ('660) teaches that both Teflon™ and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a Teflon™ coating to the gasket in the process of Corbett, Jr. ('309) because, Doolittle ('660) specifically teaches that Teflon™ and polyurethane coatings are equivalent alternatives for making an anti-friction coating.

In regard to claim 2, because the process of Corbett, Jr. ('309) in view of Doolittle ('660) teaches a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed.

Specifically regarding claim 3, Corbett, Jr. ('309) teaches spraying an anti-friction coating by spraying a dry powder.

Regarding claim 4, Corbett, Jr. ('309) teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface, and wherein the anti-friction coating is applied to at least selected portions of the circumferential contact area (see claim 7 of Corbett, Jr. ('309)).

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett, Jr. (US Patent No. 6,676,886 B2) in view of Corbett, Jr. (US Patent No. 6,328,309 B1) and in further view of Doolittle (US Patent No. 3,827,660).

Corbett, Jr. ('886) teaches the basic claimed process of installing a gasket in a socket end of a molecularly oriented thermoplastic pipe which is used to form a pipe coupling including, providing a mandrel with an inner end and an outer end and having an outer working surface; installing a gasket at a first circumferential position on the outer working surface; providing a backup collar at a second circumferential location on the mandrel, the backup collar having an exposed lip portion which abuts the gasket at an acute angle with respect to the outer working surface of the mandrel; heating a socket end of the thermoplastic pipe; forcing the heated socket end of the thermoplastic pipe over the working surface of the mandrel and over the gasket and backup collar, whereby the heated socket end of the thermoplastic pipe flows over the gasket to form a retention groove for retaining the gasket; retracting the backup collar; cooling the heated socket end of the thermoplastic pipe; retracting the cooled socket end of the thermoplastic pipe and the retained gasket from the working surface of the mandrel; wherein the gasket is an

elastomeric, ring shaped member having a circumferential contact area and an exterior surface, the exterior surface forming a sloped contact area for contacting the lip portion of the backup collar in complimentary fashion; wherein the sloped contact area of the gasket exterior surface also forms an acute angle with respect to the working surface of the mandrel; wherein the complimentary acute angles of the backup collar and gasket form a wedge shaped contact area which serves to retain the gasket in its initial circumferential position on the working surface of the mandrel as the heated pipe is forced over the mandrel and gasket; the wedge shaped contact area exerting both a longitudinal restraining force along the pipe longitudinal axis and a radial restraining force which is perpendicular to the pipe longitudinal axis to force the gasket radially inward in the direction of the mandrel as the pipe is pushed over the mandrel.

Regarding claims 1 and 3, Corbett, Jr. ('886) does not teach spraying an anti-friction coating. Corbett, Jr. ('309) teaches spraying a Teflon™ anti-friction coating onto the gasket. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Corbett, Jr. ('886) because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end and also because both references solve similar problems.

Further regarding claim 1, although Corbett, Jr. ('886) in view of Corbett, Jr. ('309) teaches a Teflon™ anti-friction coating, Corbett, Jr. ('886) in view of Corbett, Jr. ('309) do not teach a polyurethane anti-friction coating. Doolittle ('660) teaches that both Teflon™ and polyurethane coatings are used as anti-friction coatings (see col. 4, lines 5-10). Therefore, it

would have been obvious for one of ordinary skill in the art to have provided a polyurethane coating as taught by Doolittle ('660) as an equivalent alternative to a Teflon™ coating to the gasket in the process of Corbett, Jr. ('886) in view of Corbett, Jr. ('309) because, Doolittle ('660) specifically teaches that Teflon™ and polyurethane coatings are equivalent alternatives for making an anti-friction coating.

In regard to claim 2, because the process of Corbett, Jr. ('886) in view of Corbett, Jr. ('309) and in further view of Doolittle ('660) teach a polyurethane anti-friction coating, it is submitted that said coating has the same properties as those claimed in claim 2.

Specifically regarding claim 4, Corbett, Jr. ('886) teaches that the gasket is an elastomeric, ring shaped member having a circumferential contact area and an exterior surface. Further, Corbett, Jr. ('309) teaches that the anti-friction coating is applied to at least selected portions of the circumferential contact area. Therefore, it would have been obvious for one of ordinary skill in the art to have sprayed an anti-friction coating as taught by Corbett, Jr. ('309) in the process of Corbett, Jr. ('886) in view of Doolittle ('660) because Corbett, Jr. ('309) specifically teaches that an anti-friction coating provides for an improved installation process by reducing the required insertion force for the male, spigot end when entering the female, spigot end.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD

Stefan Staicovici 7/6/05

Primary Examiner

AU 1732

July 6, 2005